

CICHORIUM INTYBUS L, forma ALBUM Neum. This form with the flowers entirely white has not been recorded previously from Missouri. It is based upon the following collection: along route 129, 2.3 mi. south of Green City, Sullivan Co., August 25, 1950, *Steyermark 70127*.—WEBB CITY, MISSOURI, CHICAGO NATURAL HISTORY MUSEUM.

CONTRIBUTIONS TO THE FLORA OF SOUTHERN ILLINOIS.—Field work in southern Illinois the latter part of 1954 produced several species of plants new to Illinois. In addition, the ranges of other uncommon species have been extended by further collections.

Areas of particular interest occur in Randolph County; here are found such rare species for Illinois as *Pinus echinata*, *Asplenium bradleyi*, *Ranunculus harveyi*, *Talinum calycinum*, *Rhamnus caroliniana*, *Carex torta*, *Carex aquatilis* var. *altior*, and *Solidago buckleyi*.

Herbaria and their abbreviations for specimens cited in this paper are as follows: Southern Illinois University (SIU), University of Illinois (UI), Illinois State Museum (ISM), Illinois Natural History Survey (NHS), and that of the author (A).

#### SPECIES NEW TO ILLINOIS

CAREX DEBILIS Michx. The habitat in Illinois for this species is near the base of a densely shaded east-facing hillside. Its common associates at this station are *Spigelia marilandica* and *Pedicularis canadensis*. The species occurs in south-central and south-eastern Indiana, the nearest stations to ours being in Lawrence and Crawford Counties.<sup>1</sup> COLLECTION DATA: rich woods near Cave-in-Rock State Park, Hardin County, June 20, 1954, *Mohlenbrock 4257* (A).

CAREX SWANII (Fern.) Mackenz. The only report of this species from Illinois is based on a questionable specimen from Vermilion County, although it is not uncommon in western Indiana. It apparently is unknown from Missouri. Two plants at our station are growing at the base of a sweet gum (*Liquidambar styraciflua*). COLLECTION DATA: dry soil at the edge of a marsh, one mile north of Murphysboro, Jackson County, June 5, 1954, *Mohlenbrock 3327*. (A).

TALINUM CALYGINUM Engelm. Although this species is known from eastern Missouri, it appears that the present collection represents the first from Illinois.<sup>2</sup> A single plant was found growing along the edge of a sandstone bluff in Randolph County on August 15, 1954. A search for additional plants of this species a week later in the same area proved

<sup>1</sup> DEAM, CHARLES C. Flora of Indiana. 1940.

<sup>2</sup> Personal correspondence with Mr. Harry E. Ahles, University of Illinois Herbarium.

successful as some one hundred specimens were seen, many in full flower. They were associated with *Isanthus brachiatus*, *Opuntia humifusa*, and *Polygonum tenue*. This station in southwestern Illinois extends the range of the species to the east. COLLECTION DATA: thin soil on a dry sandstone bluff, "Castle Rock", near Leanderville, Randolph County, August 15, 1954, *Mohlenbrock 4550* (SIU, A).

*RANUNCULUS PARVIFLORUS* L. This species, naturalized from Europe, is uncommon in the midwest. It is unreported from Indiana and is known in Missouri only from Butler and Dunklin Counties.<sup>3</sup> It grows in an open wet place in a mesic woods. COLLECTION DATA: low woods, Saltpeter Cave, five miles south of Murphysboro, Jackson County, *Mohlenbrock 1936*.

*PTILIMNIUM COSTATUM* (Ell.) Raf. It had been thought that two species of *Ptilimnium* occurred in Illinois—*P. nuttallii* (DC.) Britt. and *P. capillaceum* (Michx.) Raf.<sup>4</sup> However, when the author was asked to collect specimens of these two species, the first *Ptilimnium* collected keyed out to *P. costatum*. Upon checking the herbarium specimens of *Ptilimnium* at Southern Illinois University, University of Illinois, Illinois State Museum, and the Illinois Natural History Survey (the last three by Mr. Harry Ahles), it was discovered that all sheets labelled *P. capillaceum* were actually either *P. costatum* or *P. nuttallii*. In addition, some *P. costatum* specimens had been identified as *Carum carvi*. Further field work led only to the discovery of more *P. costatum*. So far, no authentic specimens of *P. capillaceum* have been located for Illinois. SPECIMENS EXAMINED: Union County: wet soil, Big Muddy River bottoms, July 29, 1941, *G. D. Fuller* and *R. Fisher 746* (UI, NHS, ISM); river bottom forest, Clear Creek, Sept. 12, 1940, *Fuller 289*. Jackson County: rich woods northeast of Howardton, Sept. 13, 1941, *McCree 1197* (SIU, UI); Campbell Lake area near Elkhville, July 17, 1941, *McCree 929* (SIU, UI); wet soil, Carbondale, Sept. 13, 1941, *G. D. Fuller* and *W. B. Welch 1197* (ISM); six miles east of Elkhville, low woods, *Mohlenbrock 1912* (A). Pulaski County: without definite locality or date, *Fricke*.

*PTILIMNIUM NUTTALLII* (DC.) Britt. Randolph County: roadside in low ground, two miles northwest of Sparta, July 13, 1950, *G. S. Winterringer 4848* (ISM). Jackson County: north of Makanda, August 2, 1950, *Bailey and Swayne 1114* (SIU).

*RUPELLIA CAROLINIENSIS* (Walt.) Steud. The discovery of this species in Illinois is not too surprising since it is found rather frequently in southern Indiana and Missouri. Its associates at our station include *Scutellaria ovata* and *Monarda fistulosa*. COLLECTION DATA: edge of woods, near Cave-in-Rock State Park, Hardin County, June 20, 1954, *Mohlenbrock 4286* (A).

*VERONICA POLITA* Fries. (*Veronica didyma* Tenore of Pennell<sup>5</sup>). This

<sup>3</sup> PALMER, E. J. AND J. A. STEYERMARK. An Annotated Catalogue of the Flowering Plants of Missouri. Ann. Mo. Bot. Gard. Vol. 22. 1935.

<sup>4</sup> JONES, G. N. Flora of Illinois. 1950.

<sup>5</sup> PENNELL, FRANCIS W. The Scrophulariaceae of Eastern Temperate North America. 1935.

species is adventive from Eurasia. In southern Illinois, it has been found on a semi-weedy lawn, growing with *Veronica arvensis* but flowering much earlier. COLLECTION DATA: lawn, Murphysboro, Jackson County, March 10, 1955, *Mohlenbrock 4984* (A).

#### ADDITIONAL DISTRIBUTION RECORDS OF SOME ILLINOIS PLANTS

*LOPHOTOCARPUS CALYCINUS* (Engelm.) J. G. Sm. forma *MAXIMUS* (Engelm.) Fern. The giant form of this species was found growing in a drainage ditch in the southwestern part of Murphysboro. The width of the leaves slightly surpassed three decimeters. The "typical" form is present in Lake Murphysboro. In addition to Jackson County, the species is known in Illinois from Pope, Piatt, Mason, Fulton, Peoria, and Henderson Counties. Only Pope and Jackson are in the southern part of the state. COLLECTION DATA: drainage ditch, Murphysboro, Jackson County, August 14, 1954, *Mohlenbrock 4735* (A).

*PANICUM LANUGINOSUM* Ell. var. *IMPLICATUM* (Scribn.) Fern. This taxon, found in dry soil at the edge of a woods in Jackson County, is generally more widespread to the north in Illinois. COLLECTION DATA: Giant City State Park, Jackson County, June 19, 1954, *Mohlenbrock 3206* (A).

*HEMICARPHA MICRANTHA* (Vahl) Pax. Previous to its discovery in Jackson County, this tiny sedge was known in Illinois only from the northern and central counties (the most southern record being from Piatt County). This species was found at two stations along the Mississippi. COLLECTION DATA: in sand, Mississippi River cutoff, one mile south of Grand Tower, Jackson County, August 20, 1954, *Mohlenbrock 4640* (UI, A); near Cora, Jackson County, August 24, 1954, *Mohlenbrock 4648* (UI, A).

*CAREX BRACHYGLOSSA* Mackenz.. The Jackson County collection extends the range of this primarily northern Illinois species to the south. COLLECTION DATA: edge of Walker Hill Pond, Grand Tower, Jackson County, July 15, 1954, *Mohlenbrock 4753* (A).

*CAREX SPARGANIOIDES* Muhl. The habitat for this species is rich mesic woodlands. The Jackson County locality is about 175 miles south of the nearest station in Illinois for this species (Menard County). COLLECTION DATA: rich, moist woods, Lake Murphysboro area, Jackson County, June 12, 1954, *Mohlenbrock 2679* (A).

*ALLIUM STELLATUM* Fraser. This is one of the species characteristic of the hilltop prairies found along the southwestern border of the state. These prairies, atop limestone bluffs, are minute replicas of the prairies to the west. Other species which grow in this type of community include *Bouteloua curtipendula*, *Andropogon scoparius*, *Andropogon gerardi*, *Petalostemum purpureum*, *Petalostemum candidum*, and *Kuhnia eupatorioides*. The *Allium* is known in Illinois only from Jackson, McHenry and Union Counties. COLLECTION DATA: hilltop prairie north of the Pine Hills, Jackson County, August 6, 1954, *Mohlenbrock 4760* (UI, A).

*HEXALECTRIS SPICATA* (Walt.) Barnh. A colony of seventeen plants

of this rare orchid was discovered growing on an east-facing slope in an oak-hickory woods in Jackson County. Only two other locations are known for this species in Illinois (Randolph and Pope Counties). COLLECTION DATA: dry wooded slope, Fountain Bluff, Jackson County, July 20, 1954, *Sanders, Voigt, and Mohlenbrock 4330* (SIU).

*RUMEX MARITIMUS* L. var. *FUEGINUS* (Phil.) Dusen. This species, like *Hemicarpha micrantha*, was found growing in sand one mile south of Grand Tower. It now is known in Illinois from McHenry, Tazewell, Whiteside, and Jackson Counties. COLLECTION DATA: in sand, Mississippi River cutoff, one mile south of Grand Tower, Jackson County, August 20, 1954, *Mohlenbrock 4641* (A).

*POTENTILLA PARADOXA* Nutt. Specimens of this plant were found growing in sand along the Mississippi River in close association with *Hemicarpha micrantha* and *Rumex maritimus* var. *fueginus*. In addition to Jackson County, it is known in Illinois from Randolph and St. Clair Counties. COLLECTION DATA: Mississippi River cutoff, one mile south of Grand Tower, Jackson County, August 20, 1954, *Mohlenbrock 4637* (UI, A).

*GEUM VIRGINIANUM* L. Since this species was first reported from Illinois in 1954,<sup>6</sup> it has been found in three additional counties. The habitat at each station is in an open oak-hickory woods. COLLECTION DATA: Pounds Hollow, Gallatin County, summer, 1954, *Mohlenbrock, Voigt, and Sanders 1921* (SIU); Panther's Den, Williamson County, summer, 1954, *Mohlenbrock, Voigt, and Sanders 1976* (SIU); Jackson Hollow, Pope County, July 15, 1954, *Mohlenbrock 4311* (A).

*CORNUS ALTERNIFOLIA* L. f. This dogwood is not too uncommon in northern Illinois, but the Pope County collection is the first reported from southern Illinois. It grows in abundance in a rich beech-maple forest at Belle Smith Springs. COLLECTION DATA: rich woods, Belle Smith Springs, Pope County, June 23, 1954, *Mohlenbrock 3889* (A).

*ONOSMODIUM HISPIDISSIMUM* Mackenz. This species is not common in southern Illinois, the present collection being the first from Jackson County. It grows on an outcrop of limestone along the Mississippi River. COLLECTION DATA: atop a limestone bluff, Devil's Bake Oven, near Grand Tower, Jackson County, June 27, 1954, *Mohlenbrock 3206* (A).

*LIATRIS CYLINDRACEA* Michx. This is another of the hilltop prairie species of southwestern Illinois. The Jackson County station is the only extreme southern Illinois record. COLLECTION DATA: hilltop prairie north of the Pine Hills, Jackson County, Sept. 9, 1954, *Mohlenbrock 4758* (A, UI).

The author wishes to thank Mr. Harry E. Ahles of the University of Illinois Herbarium who supplied the distributional records for each species in Illinois.—ROBERT H. MOHLENBROCK, DEPARTMENT OF BOTANY, WASHINGTON UNIVERSITY, ST. LOUIS, MISSOURI.

<sup>6</sup> MOHLENBROCK, R. H. *RHODORA* 56: 227-228. 1954.